Where the Fighting in Defense of Washington Began

THE battle of Fort Stevens is written large in the annals of Washington and is an important incident in the history of the nation. Many writers have reviewed the Confederate raid through Maryland and against the capital in the summer of 1864 and the action which engaged the central fortifications of the northern line of the defenses of Washington and their defenders on July 11 and 12 in that year. Chroniclers have recorded the operations at the north approach to Washington as the battle of Fort Stevens, and the Rambler has no disposition to quarrel with that designation, because battle names rarely cover the whole area involved.

Sometimes Fort Stevens is referred to as Fort Massachusetts, that having been the first name given to the earthwork which was thrown up to cover directly the approach to Washington by the 7th street pike. At the time of the event which gave fame to that land work it was called Fort Stevens, its name having been changed from Massachusetts to Stevens in honor of the memory of Gen. Isaac Ingalls Stevens, who fell at Chantilly within a few moments of the fall and within a few yards of the spot where fell Phil Kearny. But in calling the operations of July 11 and 12 the battle of Fort Stevens one might conclude that only that link in the great chain of fortifications was engaged, whereas from Fort Reno and Fort Gaines on the west to Fort Slocum, Fort Totten and Fort Bunker Hill on the east, with the intervening forts and flanking batteries, were engaged. And the Rambler has read somewhere in the exhaustive literature of the subject that the guns of Fort Lincoln and Battery Jameson, the easternmost works of the northern line of fortifications, were employed to help repel the assault.

* * *

The campaign against Washington covered more time and territory than is commonly understood. At various times the Rambler has followed the route of Early's march. Starting from a point near Gaines mill, in the rear of Hill's lines at Cold Harbor, June 13, 1864, Early moved to the Shenandoah valley, and on the 18th was at the Rivanna river near Charlottesville. The Rambler has followed him through Lynchburg, across the fighting ground between Early and Hunter at Liberty and at Buford's gap, to Winchester, over the Potomac river at Shepherdstown, eastward through the gap in South mountain, through Frederick and over the sanguinary fields of the Monocacy, now dotted with memorials.

The fight of the army under the command of Lew Wallace at the Monocacy was a fight for the defense of Washington, though it was not known then whether Washington or Baltimore was the Confederate objective. In the story of the attack upon the defense of Washington it is difficult to tell just at which point the fighting began, but it is generally assumed that the proper

MOUNT ZION BAPTIST CHURCH.

RABBITT'S STORE ON OLD GEORGETOWN-ROCKVILLE ROAD.

point was that at which the Confederates came in contact with the pickets and the skirmish line thrown forward in the fields a few hundred yards north of Fort Stevens. This assumption seems to the Rambler to be historically unfair to a stretch of beautiful and romantic country four or five miles northwest of the District boundary, and along and between those ancient roads, the westernmost of which is called the Old Georgetown road, and the easternmost the Rockville pike.

The Rambler cannot now define this ground more clearly than that it bordered upon Rabbitts branch, which flows into Rock creek a mile southwest of Garrett Park and a trifle more than a mile west of Kensington. The principal landmarks of that neighborhood were a store on the Old Georgetown road kept by Isaac O. Rabbitt, Mount Zion Baptist Church, or "Spider Hill Church," and the homes of William H. Birch and Osborn Sprigg Wilson, on the same road, and the Flack place, on the Rockville pike about one mile east from Rabbitt's store. It was in this neighborhood that Lowell's cavalry, or a squadron or larger unit of that cavalry, under command of Maj. Frye, established contact with Early's advance guard, fought it and delayed the march of the main body.

July 10 a brigade of cavalry, the 2d Massachusetts and the 16th New York, numbering 800 effectives and commanded by Col. C. R. Lowell, was in camp near Falls Church, Va. This force was called to the defense of Washington, and it was this force or a part of it which struck Early's advance near Rabbitts branch.

* * *

In an "extra" issue of The Star, put on the streets of Washington at about noon, Monday, July 11, 1864, the Rambler finds this:

The Latest—The Rebels Appear at Rockville in Some Force—Fighting This Morning Between Their Cavalry and Col. Lowell's Union Cavalry Between Rockville and Tennallytown:—

Last evening a force of from 1,500 to 2,000 rebels entered Rockville and passed through to a point a few miles this side of the village. Halting there for a brief while, they retraced their steps to the town where they bivouacked for the night.

This morning they are engaged with a cavalry force under command of Col. Lowell thrown out to ascertain their strength and character.

No information embracing details of the progressing engagement has yet been received here.

The point where the fight was in progress was in the vicinity of Rabbitt's Creek Post Office between Tennallytown and Rockville.

In a later edition of The Star was this:

Further of the Rebel Movements:—

Up to half-past 2 o'clock the state of affairs in the vicinity of Rabbitt's Post Office continued to be about the same as this morning.

There has been no general engagement, but cavalry skirmishing is going on at intervals.

The enemy has not made his appearance anywhere within range of our guns and so far has shown no disposition to do so.

No casualties have been reported in the engagement between Lowell's cavalry and the rebel cavalry this morning.

Three rebel prisoners and stragglers were brought in this morning from the front, but they refused to give their regiments or by whom they were commanded. They are inclined to brag and to place their numbers at high figures.

A few hours after that "extra" The Star issued another telling that the Confederates had appeared around Silver Spring and that fighting was going on upon the Blair, Carbery, Clark and Brown places. But that brings the story up to the battle of Fort Stevens.

At the Post Office Department the Rambler examined the list of post offices in Montgomery county, Md., in 1864 and for several years prior and subsequent to that date, but found none by the name of "Rabbitt's Creek Post Office" and none having a postmaster by the name of Rabbitt. No doubt, there was a post office on or near Rabbitt's branch, having an official name not suggestive of the locality. Trying this trail the Rambler hit upon the name "Offutt's Cross Roads Post Office," knowing that many members of the old Maryland Offutt family lived in that neighborhood.

This trail led nowhere, for Offutt's Cross Roads Post Office was changed in 1880 to Potomac Post Office, Potomac being five miles west as the crow flies from Rabbitt's store. At Rabbitt's store a post office called "Beane" was established April 30, 1886, with Bernard L. Rabbitt, son of Isaac O. Rabbitt, as postmaster. That post office was discontinued on November 15, 1905. Rabbitt's store is standing, being occupied by Adolphus Brice and family, and with a large tract of surrounding land is now owned by F. C. Gatzendanner, who lives on a hill top a few hundred yards north of Rabbitts store. On the east side of the road opposite Rabbitt's store is the general store of Turner Wilson and Frank Wilson, sons of Osborn Sprigg Wilson, one of the early settlers and large landholders in that part of Montgomery county, and whose farm adjoined the farm of Isaac Rabbitt.

* * *

A few rods north of the Getzendanner place and off the west side of the road is the old house, in once beautiful grounds, which was the home of Samuel Clark Viers, one of the war-time owners of this historic land, where dwell today some of his descendants.

It was over these fields and through these woods that Lowell's cavalry met Early's advance in the defense of Washington. Without maps or other data, the Rambler has picked for himself, to high land north of Rabbitt's store, the Viers farm and the present Getzendanner lands as the place where contact was established with the advance guard of McCausland's troops. The Rambler seems to see Lowell's men moving northward along the road, passing down into the little valley in which Rabbitt's store stood and stands, and then passing up the hill to the Viers place, where, on the report of scouts, or perhaps a few musket shots, the command sounds out hoarsely, "As skirmishers, guide center!" Then the men in blue deploy in the fields on both sides of the old road, and the skirmishing goes on. Outnumbered and outflanked, the thin blue line goes slowly backward before the advancing lines of dusty, march-grimed gray, maintaining contact and delaying as much as possible those tried and intrepid legions of the south.

It is at Bethesda that the old Georgetown road strikes off in a northwest direction from the Rockville-Washington pike, the latter way along that part of its course running north and south. To say that the old Georgetown road leaves the Rockville pike at Bethesda may not be sufficiently specific for some persons because Bethesda is the name of a settlement which covers a surprisingly large territory, and it is also the name of election district No. 7 of Montgomery county. A branch of the Baltimore and Ohio railroad leaves the Metropolitan branch, which is now really the main line east and west, between Linden and Fenwick, and running southwest to a point near Chain bridge parallels the Chesapeake and Ohio canal to and through a part of Georgetown. The Rockville pike passes over this railroad at Bethesda village and about a quarter of a mile north of the crossing the old Georgetown road branches from the pike. At that point the electric railroad to Rockville also leaves the pike and parallels for about a mile and a half the older western road. At the parting of the pike and the road is Edgemoor. At the parting of the roads there is a heavy pole laden with electric wires, and on it a signboard inscribed "Old Georgetown Road."

* * *

Along the northerly side of the road are houses set in large gardens, a part of the suburban settlement of Woodmont. The Rambler swung along this road, passing the homes of Walter Perry, W. W. Gingell and Dr. Glazebrook, the latter's grounds and villa bearing the name Willowbrook. On the right is the home of Winifred Beck and the house and grounds of James Henderson Peter, which he calls Lone Oak. On the left is a lane fringed with old cedars, which leads to the home of A. C. Ruebsam. Then one comes in view of a low, long house with dormer windows, set in groves and fields of about fifteen acres. This is now the property of Jed Gittings, but at the time of Early's raid it was the Birch place.

The Rambler found this reference to the Birch place in The Star of Wednesday, July 13, 1864:

Mr. William H. Birch, whose residence was two miles above Tennallytown, was obliged to flee on the approach of the rebels and he is a loser by them to a considerable amount. On Monday morning he took the precaution to send his family to the city and the rebels appeared in his vicinity on Monday night. They shelled his house and commanded him to flee. Mr. Birch left with nothing but the clothing on his back. He had $1,800 in a drawer in an upper room, but was not able to get it, the shells were flying so thick and fast.

Mr. Flack, who resides in the neighborhood, came in last night and reports that Mr. Birch's property is destroyed. A son of Mr. Miller, a tenant of Mr. Birch's, was killed night before last while protecting his property. Some rebels are reported now to be in Robert Diz's woods a mile back of Birch's.

Bidding farewell to the Birch-Gittings place, you come to Alta Vista, a settlement of charming homes, and there lives Henry Kisner, one of the survivors of war days in the neighborhood of Rabbitt branch.

From Alta Vista it is about a mile to Rabbitt's store, and on the way you will pass Mount Zion Baptist Church. It is an old church organization, but the church building is new, having been erected on the site of a much older building. Around the little church are many graves, and on one stone the Rambler read this:

Leathanna Maria, wife of Isaac O. Rabbitt, born October 19, 1835, died Feb. 23, 1900.

Bernard L. Rabbitt, born Feb. 27, 1861, died Oct. 20, 1898.

The Rambler loitered among the graves and jotted down the following:

In memory of Elizabeth, wife of Rev. M. H. Austin—1842-1905; Milton E. O. Austin, son of M. H. and L. Austin, died November 25, 1882; Annie E. Austin, daughter of M. H. and L. Austin, died November 21, 1882, and Laura B. H. Austin, daughter of M. H. and L. Austin, died November 17, 1882.

In memory of Theophilus Talbott, died March 30, 1883, aged 66 years; Martha V., wife of Theophilus Talbott, died July 17, 1891, aged 50 years; Martha, wife of Guy F. Austin—1808-1897; Daniel P. Greenfield, 1907, aged 66; Samuel W. Greenfield, 1908, aged 73; Ann M., wife of Samuel Greenfield, 1905, aged 65; Truman Greenfield, 1865, aged 61; his wife Caroline, 1889, aged 71; James T. Greenfield, Walter N. Greenfield and his wife, Josephine; Charles H. Talbott, 1829-1892; Caroline Talbott, 1865-1898; Filomino Petrone, 1846-1914; Osborn Sprigg Wilson, 1836-1911; Elizabeth Ball, wife of O. S. Wilson, 1831-1901; Isaac Riley, July 5, 1850, aged 76; Matilda Middleton, wife of Isaac Riley, 1800-1890; B. F. Riley, 1845-1872; Lewis Keiser, died 1886, aged 68; Jane A. McNeal, 1865, aged 55; Samuel Clark Viers, 1822-1898; his wife, Hester W. Viers, 1823-1905; Sarah H. Viers, 1864-1914; Samuel C. and Hester W. Viers, died 1867; Robert Lee Viers, 1864-1909.

It is an interesting as well as a fine and fruitful country along the old Rockville-Georgetown road and there is much to be written of that neighborhood.

Among the Homesteaders of Tanana Valley in Alaska

(Copyright, 1916, by Frank G. Carpenter.)

FAIRBANKS, Alaska.

I HAVE just returned from an automobile trip through some of the rich farming lands of the Tanana valley. This part of Alaska has the largest body of good soil in the territory, and the government is expecting an invasion of homesteaders as soon as the railroad from Seward to Fairbanks is completed. Much of the land is in what is known as the Tanana bottom. It comprises a tract about 200 miles long and, in places, 70 miles wide. Altogether it is about as big as the state of New Jersey, and its cultivable country is one-fifth as large as the state of Ohio. My journey today was through a rolling region as beautiful as the Pennsylvania foothills of the Alleghenies. The land rises from the river and gently slopes to the mountains, which are far off in the distance.

* * *

As we rode up the valley it was difficult to realize that we were on the border of arctic Alaska. The thermometer was at 90 degrees in the shade. There was no snow on the tops of the mountains, and the hills and valleys were covered with green. At times we passed through plains spotted with wild flowers. There were beds of buttercups as yellow as gold, and daisies as pink as the cheeks of a baby. In some places the ground was covered with blueberry bushes, the fruit as large as cherries and loaded with juice. Now we passed through forests of birch, spruce and cottonwood. Some of the trees were two feet in diameter. Where the woods had been cut or burned away there were vast expanses of flaming pink flowers as high as the wheels of the car, and everywhere the roadside was hedged with green grass and red-top that reached to the hubs. Now and then we went over corduroy, our automobile bouncing high under the fast driving of the Jehu of this northern frontier.

We passed many small farms cut out of the woods, with oat hay and potatoes in blossom. We saw cattle grazing, and by and by came to the experiment farm which the government has established in the heart of the Tanana valley, about four miles from Fairbanks. The farm is beautifully located. It consists of 1,280 acres of gently sloping hillsides and bottom land, sloping at one side to a wide stream and rolling thence on up and over a low range of hills.

At one end of the farm is the site recently selected for the Alaska Agricultural College, the corner stone of which was laid in 1915. The college will stand on a hill, giving magnificent views for fifty miles up and down the Tanana valley, taking in Fairbanks and also the blue mountains, far off in the distance. On a bright day Mount McKinley is visible. The campus will include a forest of birch trees as straight as an arrow. Their trunks are as white as frosted silver, and they end at the top in green leaves.

The experiment station has now from 80 to 160 acres under cultivation, and forty acres more are being cleared along the roadside. As we rode by we could see men cutting the trees and burning the brush. A little farther on we came to grain fields, not little patches, but fields that would be large on any farm in Virginia. We passed tracts of oats ready for reaping, and rode through barley which was four or more feet in height. Above these on the hillsides were long strips of Siberian wheat, planted last spring and now ripening, and side by side with them strips of experimental grains of one kind and another. On the crest of the hills were the farm buildings with buckwheat in front, and a potato patch of five or six acres between it and the oat fields we first passed. The potatoes were in full blossom, the vines were luxuriant and the hilled-up rows reached to my thighs.

* * *

Potatoes grow well in this part of Alaska. Two hundred bushels per acre is not uncommon, and the country is now raising about all that is needed for the towns and the camps. A year or so ago the station sold the yield of five acres for $3,500, and it has records of three acres which have produced a value of from $500 to $600 per acre for years in succession. Potatoes are sold by the pound. They bring from 6 to 9 cents, according to season. Some claim the tubers lack the mealiness of those of the Rocky mountains. Those I have had, have been dry and delicious.

I spent some time at the experiment station. The home of the farmer is a one-story cottage surrounded by beautiful flowers. At one side of it is a great bed of pansies, and in the front yard are more pansies, in patterns of intricate design. About the porch sweet peas have climbed to the height of your head, and the blossoms have a color and freshness not found in the sweet peas in the states. This is so of all the flowers of Alaska. The growth is so rapid, they seem to have been born overnight, and that in the rain.

During my stay I talked with the superintendent. His name is J. W. Neal. He comes here from the Agricultural Department at Washington. He tells me he has about 100 acres under cultivation, almost all of which is in grain of various kinds. He is clearing more land and extending the farm. I asked him as to the cost of clearing. Mr. Neal replied:

"It cannot be done for less than $100 per acre, and some tracts will cost more. The trees have to be cut, the roots gotten out, and the ground and trees must be burned over in order to kill out the moss. Some of the land has to be drained, and it takes some time before it can be brought under cultivation. A great part of the country is underlaid with prehistoric ice, the soil being frozen down to bedrock. In some cases the frozen strata is only a few inches below the surface, and in others it may be a yard or so deep. After the land is cleared this gradually melts until it has no effect upon cultivation and growth."

Mr. Neal does not think that large farms will pay in this part of the world. He says the markets for a long time will be limited to the local community which will be supported by the mines. The demand will steadily increase as the country is opened, and in time there will probably be a considerable population of small farmers.

Leaving the experimental farm, we visited some of the homesteads nearby. The first was owned by a man named Young, who came to Alaska with nothing about seven years ago. He took up 320 acres of government land and a large part of this is now under cultivation. He is raising oats-hay and potatoes; he has also a big greenhouse, where he grows tomatoes and other vegetables for the mining camps and the town. Mr. Young was not at home when we called, but Mrs. Young showed us about. As we looked over the farm I asked her how she liked living in this far-off Alaska. She replied that she had been a little dissatisfied until she had gone "outside" last summer, but that since she returned she had had no desire to go out again. Said she:

"This country is my home, and a mighty good home it is. You can see what the summer is like. We are perfectly comfortable during the winter. We always have plenty to eat, we get high prices for all that we sell and we are further ahead every year."

At that moment we were looking over the stock in the barnyard. It included two big sows, each of which had eight or ten little pigs running with her. The pigs were perhaps a month old. Mrs. Young pointed to them, saying, "We sold a pair of those pigs yesterday for $20. That will give you some idea of what things bring in this country."

Our next visit was to a dairy farm belonging to a Mr. Hinckley. This farm supplies much of the milk and cream consumed in Fairbanks, and it also sells butter, buttermilk and cottage cheese. The milk brings $1 a gallon, and cream $1 a pint. Buttermilk sells for $1 a gallon, butter 75 cents a pound and cottage cheese or smearcase for 50 cents a quart. We went with Mr. Hinckley to the barn to look at his cows. He has twenty, which give on the average three or four gallons of milk every twenty-four hours. The milking is done twice a day, and the cows had been brought into the barn at the time of our visit. They are what you would call good average stock in the states.

The cow barn is interesting. It is a well built log structure, 30 feet wide and 90 feet long, with the stalls facing a platform which runs through the middle about two feet from the ground. The walls are sunk in the earth, and the stable is floored throughout with boards, the floors of the stalls sloping to the walk behind them, so that they can be kept perfectly clean. The building has a galvanized iron roof, in which are windows that can be raised for ventilation. It is well lighted. It has a large stove at one end, but Mr. Hinckley says that this is for cooking the feed only, and that the cows get along well without artificial heat.

Adjoining this barn is a hay shed filled with native grass, just harvested, and near it are large fields of oat hay ready for cutting. The dairyman has not bought any hay for several years. He relies on the native grass and his oat hay for his stock. He says the oat hay is quite as good as timothy, and very much crisper, the timothy brought in from outside selling for $100 per ton. Shorts and oats cost respectively $90 and $95 per ton.

The Rickert farm does a large business in trucking and hothouse farming, supplying a great part of Fairbanks and shipping vegetables to the towns and mining camps for miles around. It sends green stuff to Hot Springs and Fort Gibbon, and also to the gold mines of the Iditarod and Ruby. The freight rate to Ruby is $32 a ton.

The gardens of this farm cover twenty or thirty acres. As we walked through them I asked as to the crops, and was told that there are now in the ground 29,000 cabbages, 30,000 stalks of celery and some acres of head lettuce. The celery is especially fine, growing to a height of four feet. Some of it was sent to Montana a few years ago to show what Alaska could do, and President Taft sampled it during his trip through that state. He declared it the finest he had ever tasted. Mr. Rickert expects to harvest this year about twenty-five tons of turnips, five tons of beets and thirty tons of cabbages. As we went through one of the fields I pulled up a cabbage and put it on the scales in the greenhouse. It weighed twenty-six pounds. Others weigh more. Cabbages are now worth 8 cents a pound, and cauliflowers are selling at from 25 to 26 cents a pound. Some of the crop is sold when it is taken out of the ground. The rest is stored away in the cellar and marketed during the winter.

FRANK G. CARPENTER IN AN ALASKAN CABBAGE PATCH.

The hothouses are one of the most important parts of this farm. There are several, each devoted to a different crop. There is one 120 feet long that grows melons only, including watermelons, casabas and cantaloupes. The vines are trained upon wires running along under the glass, and from the beds up to the roof. From these wires the melons hang down, the heavier ones being supported by rags as though in a sling to prevent them breaking the vines. Some of the cantaloupes are now ripe. I asked as to the price, and was told that they sell for a dollar a pound. Some of the melons weigh four or five pounds, which means four or five dollars for a cantaloupe.

During my stay in the Tanana valley I have asked the farmers and agricultural experts some questions as to the farming conditions. They are altogether different from those of most parts of the United States proper. Fairbanks is more than one hundred miles south of the arctic circle, and the growing season is short, ranging from three to four months, and extending in favorable seasons perhaps a half month longer. The last spring frosts occur about the middle of May, and frosts begin again during the latter part of August or first of September. There is really no darkness in midsummer, and the long sunlight adds to the growth of the crop. June, July and August are warm, the thermometer sometimes going to 96 degrees.

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The winters are cold, in the Tanana valley the mean temperature in January being about 20 degrees below zero. The thermometer ranges from the freezing point to 60 or 70 degrees below zero during December, January and February. After the freeze-up, which begins about the last of October, there is steady cold weather from then until May. The ground is frosen as hard as a rock; quiet bodies of water become ice to a depth of six feet; and there is from three to six feet of ice on the lakes and the streams. The Yukon has three or four feet of ice. The steamers are then the sled roads; and travel is easier than in the summer. The ice and snow begin to melt in April and early May. The small streams flow into the larger ones, raising the ice sheet so that it is torn away from the shore. It breaks into pieces and starts on its way to the sea, the cakes of ice grinding against one another and piling up in great masses. As they go on they carry every movable thing in their path. This movement lasts for a week or so, when the streams clear, and the boats start out from their winter quarters.

The soil is fairly fertile. Some of that about Fairbanks grows two hundred bushels of potatoes per acre without manure. When the woods are cut down the native red-top springs up. There is pasture everywhere in the summer. The best lands are the gently sloping hills, composed of fine silt, sand and gravel. The most of the soil is sandy. The very best is the Fairbanks silt loam, of which there are altogether a half million acres in the Tanana valley.

I close this letter by warning the would-be settler that cutting a farm from the forest and dragging it out of the ice is no baby job. It is better suited to men of from twenty to thirty than those over sixty. The first year or so will be full of hard work, and the homesteader should bring along enough money to keep himself and his family during that time. Practically all the land needs clearing. A cabin will have to be built, and a garden patch cut out of the woods. A log barn will be needed; and, if possible, a hothouse should be erected. The most of the work will have to be done by the farmer and his family. Wages are high. A common hand gets $5 or $6 a day and board, or, if hired right along, from $100 to $150 a month. Mr. Rickert pays his "lady cook" $75 a month and her board. A servant who does general housework will want $10 or $12 a week, and women who come in to help on wash days and sweeping days will charge from 50 cents to 75 cents an hour. These are the wages in Fairbanks. The result is that most of the women do their own work, hiring help only for the heaviest kinds of labor.

FRANK G. CARPENTER.

Uncle Sam's Chief Roadmaker Tells How Millions Are to Be Spent on New Highways All Over the United States

BY JAMES B. MORROW.

MAN walked, when he traveled, ages ago. Some say on four legs; others says on two. Then he caught a wild horse, a donkey or a bull, broke it and climbed on its back. Wheels, the greatest of all his discoveries, perhaps, gave him a seat on which to sit and ply his gad or crack his whip. Thus he moved about, along with his wife or wives, his children and his goods.

Paths became roads, deep with dust or mud, in the parade of the seasons through the almanac. Man's war with his roads, possibly, has cost him more in blood and money than have his wars against himself, as nation has met nation, passioned by conquest or self-defense.

Living now, far east of the Mississippi, are many persons who, in their youth, during spring thaws and autumn freezings, remained at home or journeyed on foot. Mills ran short of stocks for want of corn and wheat; and meal and flour went up in price. It was the same with butter, eggs and meat.

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Markets fluctuated, according to the fluidity or solidity of the mud. A ride of a mile meant an hour spent in cleaning one's horse. It was cheaper to walk and then scrape one's boots with a stick. Couples who might have wedded were kept apart.

By and by appeared wheels revolved by gasoline—the same old wheels, except for their spokes, that were revolved by oxen when man carried a long stick and wore his beard down to his knees and little of anything else. In boast—reasonable at first look—drivers of automobiles say that to them belong the cheers if American roads are improved. They overlook the machine itself.

Irrespective of his eloquence, energy or facts, man would still be floundering in the mud or jolting his bones over frozen ruts were it not for the vehicle that has changed the whole method, except on railroads and in ships, of hauling passengers and small and coarse freight. The automobile holds cities, villages and farms in glad bondage, and going to Congress demands and is voted $75,000,000 in cash.

Five millions of the money is to be spent in the states this government year, the last day of which is June 30, 1917. Engineers all over the country are making plans. Contractors are getting ready to bid. Federal experts are putting a finer edge on their wits. Ten million is to be the outlay next year, fifteen million the year following, twenty million the year after that and twenty-five million during the year that will close in June, 1921.

The balance of the appropriation, $10,000,000, is to be expended during the coming ten years on the "roads and trails in and adjacent to the national forest reserves." The Secretary of Agriculture will be the watchman on the walls that surround all the funds. Actually, however, the watchman will be Logan Waller Page, director of the office of public roads, which means that he is Uncle Sam's road-maker-in-chief. He is both a geologist and an engineer.

Since leaving Harvard more than twenty years ago, Mr. Page has been testing cements, rocks, bricks, clays, gravels and all the materials, singly and in combinations, with which modern roads are constructed. This he has done for the highway commission of Massachusetts, the Lawrence Scientific School at Cambridge and the United States government.

Grafting local officials and crooked contractors, if any are discovered, will be dealt with in kind by the state where they are found. The only action of the national government will be to withhold the share of money it would have paid for the building of the road on which the irregularity occurred. This menace to wrongdoers, it is thought, will keep matters straight.

* * *

"Congress," I said to Mr. Page, "has appropriated $75,000,000 to aid in the building of roads within the states during the next five years. The states, however, must expend on the same roads at least an amount equal to that contributed by the national government. How many miles can be built for $150,000,000?"

"If you asked how many houses could be put up for $150,000,000," Mr. Page answered, "I would inquire, if I were an architect: 'What kind of houses? Brick or stone or wood?' Roads may cost $25,000 a mile or more. In the southeastern part of the country, where there is a large supply of gravel, roads can be built at a very low cost. Rock may be used in other states. It costs more than gravel. There are also sections of the United States having an abundance of shale, but having neither rock nor gravel. In such places the shale may be manufactured into vitrified bricks and the bricks used for making roads. What can be done cheaply in one part of the country, therefore, becomes dear when tried somewhere else.

"Then, while the sum to be spent out of the federal Treasury is limited to $10,000 a mile there is no restriction as to the sum each state may spend per mile of its own money. No man can tell how many miles of roads $150,000,000 will build."

"What method is followed in giving money to the states?"

"National funds are given them based on their area, population and the mileage of their rural delivery and star postal routes. Texas, for exmaple, will get $292,000 this year, New York $251,000, Pennsylvania $281,000, Illinois $221,000 and Delaware only $8,184."

"Do you know the length of the roads in the United States?"

"Our latest figures give the mileage as about 2,300,000," Mr. Page answered. "New roads are being opened every year. A fifth of the present roads carry from 85 to 90 per cent of the total traffic. The remaining roads, for most part, are feeders of the main highways. My vision just now does not include the improvement of every road in the United States—that will come by and by."

"Nevertheless, hundreds of millions of dollars must be spent in the future?"

"Undoubtedly," Mr. Page answered. "It should be understood, however, that the states are now spending $250,000,000 yearly on new roads and in the maintenance of old ones. They have been compelled to do this by what may be termed the development of civilization. Three million automobiles are being operated daily in the United States.

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"Assuming that they will average twenty horse-power to the car, 60,000,000 mechanical horse-power is tearing daily up and down our roads. Moreover, horses and mules have not lessened in numbers, but have increased.

"The wear and tear of 3,000,000 automobiles, many of them heavy trucks, and of more horses and mules than ever before have compelled the states to meet the heavy traffic requiremnts of modern life. The national government, which uses the roads in collecting and delivering the mails and parcel post, and which may need them for military operations, has come forward to help bear the expense. There is no blinking the fact that immense sums will be necessary in the future not only to construct roads, but to keep those built in repair. As only its surface wears, a considerable part of the first coast of a road will not have to be met when the top is renewed.

"Sharp curves are taken out of modern roads because they are dangerous to motorists and to citizens going about their business and traveling the other way. Grades are cut down. Such work, once done, is, barring accidents, done for all time.

"Culverts and bridges greatly increase the first cost of road-building. Road surfaces may last ten years. Some last longer and some less. Here again only broad statements can be made in safety. Many materials are used as surfaces for roads. Then the surfaces vary as to thickness and width. A thick road of good material is more durable, of course, than a thin road of poor material, but the last may outlive the first, if it is taken care of while the other is neglected."

"Who pays for the roads in Europe?"

"Who pays for everything and all things?" Mr. Page replied. "The people. I am glad you spoke of Europe. There is a notion in this country that Europe has had solid roads for centuries. A hundred years ago, however, the roads there were not nearly so good as are American roads at present.

"Napoleon started the good roads movement in France. Napoleon III continued the policy. France now has the best highways in the world. Even so, during the last ten years the United States has built more miles of modern roads than are included in the whole national road system of the French republic."

"Stretches of the Appian way, out of Rome, built 2,000 years ago," I said, "are still in good condition. What do you know about that wonderful road?"

* * *

"That any engineer could duplicate it today if some one would supply the money. The Romans possessed no art that has been lost. They made the Appian way, which is hard and rough, of mortar and flat stones. The cost today would be $250,000 a mile, some engineers say. The estimates of other engineers run as high as $400,000. Such a road ought to last, which is about all that can be said of it."

"What is to prevent political favoritism and scandals in the awarding of road contracts by the states during the rich five-year money period created by Congress?" Mr. Page was asked.

"Checks," he replied. "The Secretary of Agriculture and the highway commissions of the states will build the roads. Now, when a road is to be built, the state chooses the road—a county doesn't choose it, a congressional district doesn't choose it, but the state, as a whole, and the state is the highway commission or a highway commissioner. But the choice must be approved by the Secretary of Agriculture in Washington.

"The road to be built having been designated, the Secretary of Agriculture may send an engineer to ascertain whether a practicable and desirable choice has been made. Once the choice is ratified in Washington, plans from the state must follow, together with a close estimate of the cost of the improvement. The plans are studied by engineers in my office. Every act of the state so far has been scrutinized. Then follow the bids of contractors. Accepted bids are submitted to the Secretary of Agriculture. His engineers, on examining them, know if they are reasonable or if they are extortionate. Also they will discover if a responsible and lower bidder has been treated unfairly by the state authorities.

"No contracts cannot be made over the veto of the Secretary of Agriculture. So at last, let us say, the work is under way. The state is doing it, but the national government is helping to pay the cost. We take for granted, of course, that the state wants an honest job, but something more, under the law, is required.

"At every step, as the work goes on, the eye of Uncle Sam is on the road. Engineers in the field—officers of the national government—are watching the specifications, the materials and the workmanship. They know all about roads. If anything is wrong they will report it immediately to Washington and the flow of money from the national Treasury to the state will stop at once. Such are some of the checks which, it seems to me, will make irregularities almost impossible."

"What states have the best roads?"

"Among the leaders are California, Maryland, New York, Massachusetts, Connecticut, New Jersey and Ohio."

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"Have you ever thought that prisoners in state penitentiaries might be used in building roads?"

"Oh, yes; I have gone into that matter at some length. Roads cannot be built at the north in the winter. Nor would it pay to keep costly machinery idle in prison factories throughout the summer while work was being done on the roads by convicts. Yet in the north a certain number of prisoners might be employed on the highways in warm weather and given other outdoor labor the rest of the year.

"In the south, however, it is feasible to carry on road work regardless of seasons. We are just now in the midst of an interesting and important experiment. Georgia authorities assigned forty negro prisoners to work in a model camp, under plans devised by government officials. These prisoners are fed and housed in movable buildings, according to standards of the office of public roads and the public health service.

"Not a prisoner in the eight months of the experiment has escaped or attempted to escape. The cost of their food has been reduced from 22 cents to 17 cents a day. Only one-fourth of 1 per cent of the men have been sick, even though the working day is ten hours long. In all respects the results have been surprising."

LOGAN W. PAGE,
Uncle Sam's chief roadmaker.

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Origin of Names.

MORE than a century before William the Norman and his hosts invaded England the use of surnames was made obligatory by statute in Ireland, thus giving the Emerald Isle the distinction of being the first to compel the use of double names. As a matter of historical fact, surnames did not come into general use in England until the reign of Queen Elizabeth, while it was late in the seventeenth century before surnames were generally used in Wales.

Interesting meanings attach to many of the most common Irish names. A few, with the curious changes in spelling wrought by the passage of time since the names originated, are these:

Sullivan originally was Sillifant and Sullivant, and the name meant "the quick sighted." O'Donnell, McDonnell and all variants and combinations of that name came from Donald, Daniel and Dona, meaning "a dark chief."

The original of Murphy was O'Murphey, Morphey and Morphiew, meaning "superlor." Kelly came from O'Kelly, Kiely and Keeley, all meaning "for war."

O'Connor comes from Conners, Conerty, Connor, and the name's meaning is "a helper." Dougherty is derived from O'Doherty, Doherty or Daughaday, meaning "a destroyer." It is to be noted that all Irish names in their first stages were prefixed with O', the first change being the dropping of the prefix.

Moloney in its original form was O'Mullowney, Meloney or Mullant, the name meaning "the thoughtful one." McCormack was originally O'Cormac, MacCormac or MacCormick, meaning "son of the crown." Flynn was at first Flann, which meant "red," while Flanigan was Finnigen, which meant "the druid." Boyle was Boylan, Bolan, Boland or Boylin, meaning "the benign." O'Bryan was Bryant, Bryan, Briney, Byron, meaning "a singer or author." Brady was MacBrady or O'Brady, which meant "the captain of the ship." Macauley was O'Cawlew, McGawly, McAully, McAulif, Cawley, meaning "the echo," or literally "the son of the rock."

Revolting Sangfroid.

JAMES M. BECK, an American lawyer, said at a dinner in London:

"Germany set out to conquer Europe—set out to kill and maim some ten million young men—with the revolting cold blood shown by the barefoot dancer.

"A beautiful barefoot dancer, fingering her string of pure pearls, listened on the terrace of a roadhouse, over a lobster and a bottle of champagne, to a septuagenarian's passionate protestations of love.

"'And, remember, dearest,' the septuagenarian quavered, 'remember, ere you decide, that a man is only as old as he feels.'

"'Oh, I'm not worrying about that end of it, little one,' the barefoot dancer answered, with a merry laugh. 'What I want to know is, are you as rich as you look?'"

When Scot Meets Scot.

GEN. SIR DOUGLAS HAIG is a Scot. His staff is composed for the most part of young Scotchmen. Even the sentries before his quarters are Scots as a rule.

Sir Douglas, coming forth one morning after breakfast, was saluted by a strange sentry.

"'Who are ye?' he asked the man in his broad Scotch accent.

"'Fine, general! An' hoo's yersel'?' the sentry answered, heartily.